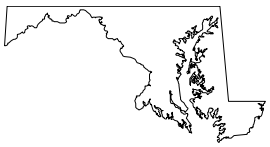


HIV

Focus Area 1 - Reducing HIV Infection in Maryland

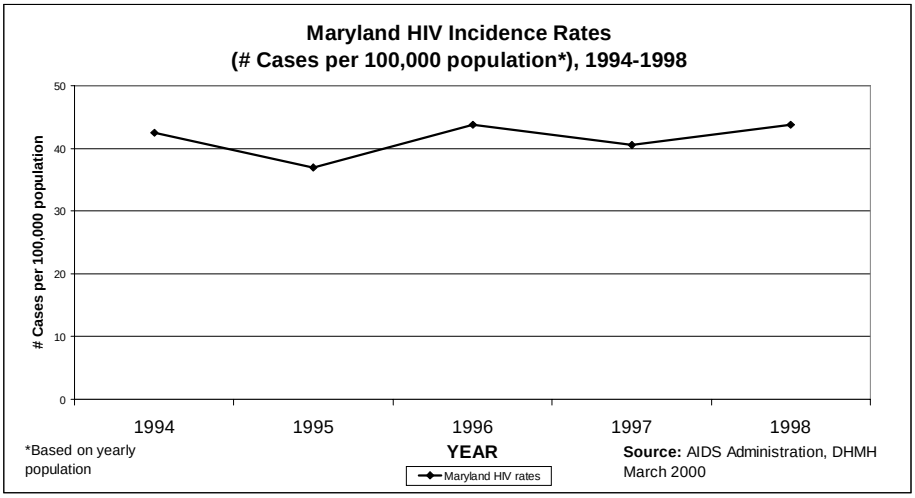
Definition

Human Immunodeficiency Virus (HIV) is the pathogenic organism responsible for Acquired Immunodeficiency Syndrome (AIDS). HIV cases are first time reports of HIV infection in pre-AIDS individuals with a positive HIV test and Maryland residence at the time of diagnosis. HIV incidence rate is the number of new HIV cases diagnosed during a year divided by the population and is expressed per 100,000 population.

Problem

Maryland had the fourth highest AIDS incidence rate in the United States from July 1998 to June 1999, with 32 cases per 100,000 population. Since reporting began in 1994, HIV incidence in Maryland has been increasing; reaching 44 per 100,000 population in 1998. A cumulative total of 12,111 non-AIDS HIV infections have been reported in Maryland as of September 1999. Approximately 2,000 new HIV cases are reported each year and this number is increasing at a rate of 3% annually. Despite estimates from the Centers for Disease Control and Prevention (CDC) of declining HIV infection nationally, there is an increasing population of people becoming infected with HIV in Maryland.

Major Determinants

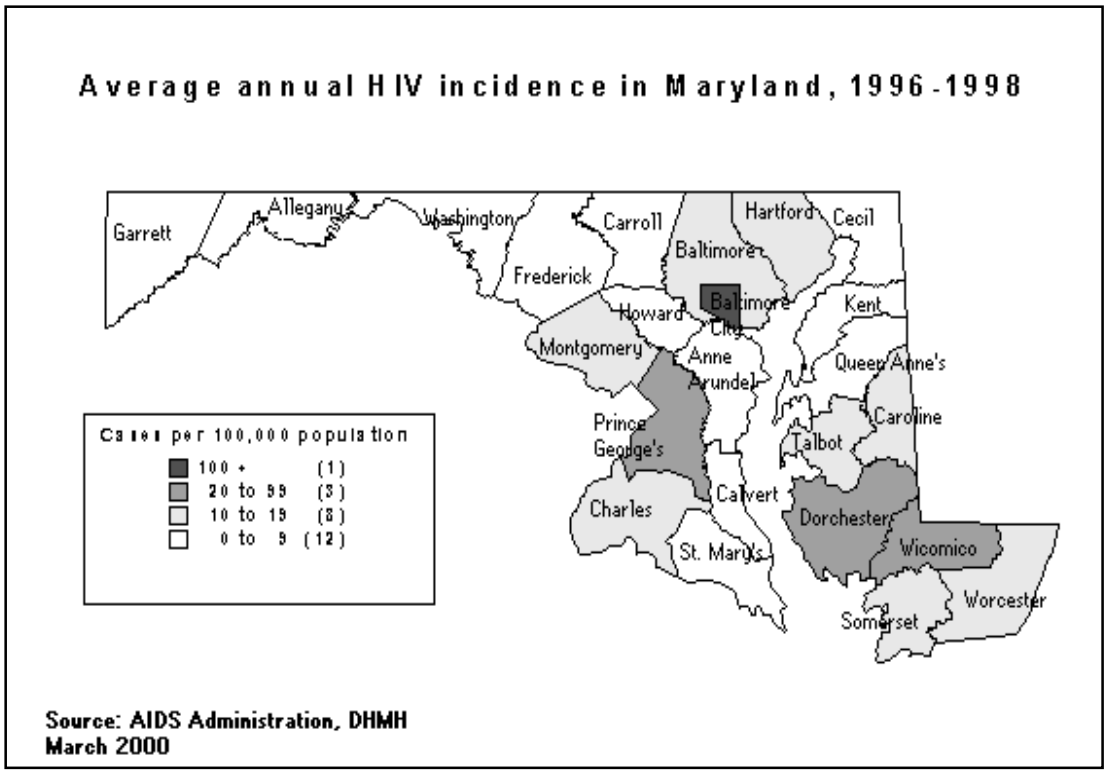


HIV is present in bodily fluids and is transmitted primarily through sexual contact and sharing needles during drug use. Involvement in high risk sexual and drug use behaviors are major determinants of HIV. The main exposure categories are classified as: men who have sex with men (MSM); injecting drug use (IDU); men who have sex with men and injecting drug use (MSM/IDU); hemophilia/coagulation disorder; heterosexual contact with a partner who has or is at risk of HIV or with a partner of indeterminate risk; and receipt of blood transfusion, blood components, or tissue. Nearly all HIV infections in children are perinatally acquired. The provision of antiretroviral therapies during the perinatal period resulted in substantial decreases in mother-to-child transmission of HIV.

Exposure information is currently available only from those tested in publicly funded HIV Counseling and Testing Services (CTS) sites (approximately 25% of HIV cases). Data from this subpopulation suggests that most 1998 HIV incident cases are due to heterosexual contact (49%) followed by IDU (33%), and MSM (7%). The proportion of persons in the general population engaging in these sexual and drug use risk behaviors is unknown. Despite incomplete risk behavior information on both the cases and the population, examinations of affected populations reveal geographic, racial, and gender disparities that can identify high-risk sub-populations.

Baltimore City, suburban Baltimore, and suburban Washington account for over 75% of Maryland's cumulative HIV cases. A map of Maryland shows the average annual rates of HIV incidence between 1996 and 1998. Of Maryland's 24 jurisdictions, Baltimore City has a substantially higher average HIV incidence rate (175 per 100,000) and higher numbers of HIV cases (6,407 cumulative) than the rest of the counties in the State. Prince George's, Wicomico, and Dorchester counties also have high HIV incidence rates (32, 25, and 25 per 100,000, respectively). Though there are not many cases in Wicomico and Dorchester counties (14 and 9 in 1998, respectively), the case rate is relatively high.

Of the over 33,000 individuals tested confidentially through the CTS program in 1998, 64% were African-American and had a 2.6% HIV positivity rate, substantially higher than the 0.7% for whites. HIV disproportionately affects males and African-Americans in Maryland. The 1998 HIV incidence rates are 59 per 100,000 for males and 36 per 100,000 for females. The African-American population has the highest rates among both genders, followed by Hispanic and white populations. HIV incidence in African-American males is approximately twice the rate than in



African-American females. Though the reported infection was concentrated mainly in males during the first several years of the epidemic, over time, HIV incidence rates have been increasing among African-American females. The net result is a narrowing gap between males and females infected with HIV.

Objective 1 - Eliminate the increase in HIV incidence (particularly among African-American and other disproportionately affected groups, with special focus on high incidence areas) and maintain a rate of 44 new positives per 100,000 population.

Objective 2 - Increase the number of African-Americans receiving HIV education, counseling, and testing services by 25% from 42,000 tests in 1998 to 52,500.

Objective 3 - Reduce perinatal transmission of HIV from 25 cases per year in 1998 to less than 10 cases per year.

Action Steps

- ⇨ Expand the availability of and access to HIV counseling and testing services in disproportionately affected populations.
- ⇨ Increase collaboration among agencies to enhance access to and use of needed prevention services by disproportionately affected populations.
- ⇨ Reduce the drug and alcohol use associated with HIV risk behaviors among adults and youth in Maryland by increasing perceptions of risk, reducing risky drug and alcohol related activities, increasing substance abuse treatment opportunities, and improving adherence for those who choose to go into treatment.
- ⇨ Among the current providers, increase their skills and support to deliver quality HIV risk reduction interventions.
- ⇨ Increase the supply of free and sterile needles among injection drug users.
- ⇨ Increase the number and intensity of well-evaluated prevention interventions and reduce stigma of HIV testing in the African-American and other disproportionately affected populations.
- ⇨ Increase the accessibility of condoms among sexually active youth and adults engaging in risky behaviors and increase the use of condoms by persons engaging in risky behaviors.
- ⇨ Provide prenatal care according to established standards for all HIV positive pregnant women.

Partners

AIDS Administration, DHMH • HIV Prevention Community Planning Group • Johns Hopkins University • Maryland Association of County Health Officers • Maryland Local Health Departments • Maryland Mental Hygiene Administration, DHMH • Maryland State Department of Education • Morgan State University • University of Maryland, Baltimore County • Numerous other state universities and over 50 community-based organizations

Related Reports

Maryland Community Planning Group. (2000). *HIV Prevention Plan 2001-2003.*

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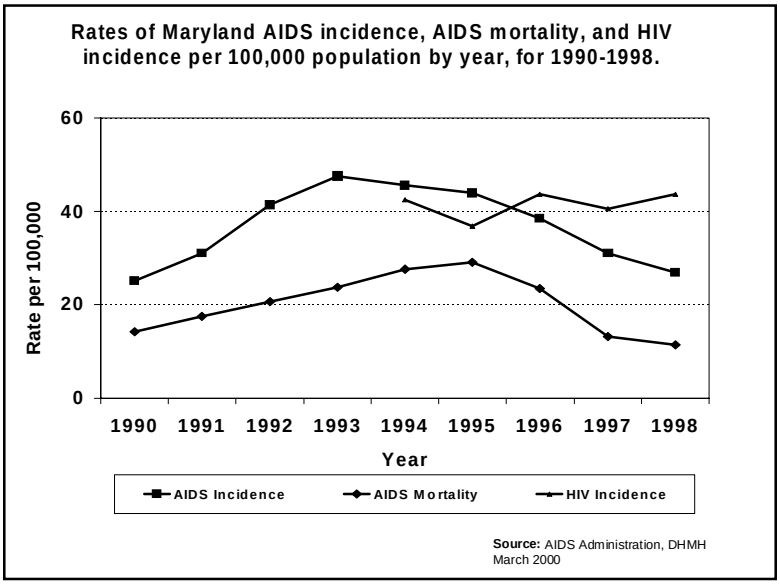
Focus Area 2 - Extending Life for People with HIV

Definition

Acquired Immunodeficiency Syndrome (AIDS) is the advanced clinical stage of Human Immunodeficiency Virus (HIV) infection. The HIV incidence rate is the number of new HIV cases diagnosed during a year divided by the population and is expressed per 100,000 population. HIV incidence is not true incidence, because several years may elapse between infection and HIV testing (detection). The AIDS incidence rate is the number of new AIDS cases diagnosed during a year divided by the population and is expressed per 100,000 population. The AIDS mortality rate is the number of deaths among AIDS cases during a year divided by the population and is expressed per 100,000 population. The one-year survival is an estimate of the proportion of AIDS cases that are alive one year after diagnosis and is expressed as a percent. The median survival is an estimate of the time after AIDS diagnosis at which one half of cases are alive and is expressed in months.

Problem



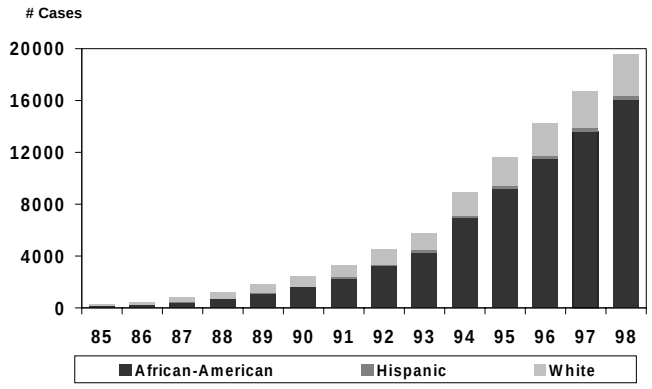
The first case of AIDS in Maryland was reported in October 1981. By November 1999, a total of 20,000 cases had been reported. In the early years of the epidemic there was no way to detect HIV infection, and rapid death after AIDS diagnosis was universal. During the first five years, only 38% of people survived one year after their AIDS diagnosis. HIV testing became available in 1985 and during the late 1980's natural history cohort studies estimated the time from HIV infection to AIDS diagnosis to be eight years and the time from AIDS diagnosis to death to be two years. New treatment regimens have resulted in improvements in, even doubling of, these survival times. However, since the average age at AIDS diagnosis in 1998 was 40 for males and 37 for females, and the life expectancy for males that age is 37 more years and for females 44 more years, HIV has dramatically shortened people's life expectancies.

Major Determinants

The major determinants for extending life for people with HIV are early detection and treatment of infection and access to appropriate medical care, including antiretroviral therapies. There are three points to measure in the spectrum of HIV disease: the point of initial detection of HIV, the point of severe immuno-suppression (AIDS), and death. The goal is to expand the time between these three points. HIV surveillance began too recently (June 1994) to provide reliable

population estimates of time from detection of HIV infection to AIDS. In addition, due to delays in test seeking, the time from actual HIV infection to detection of HIV is not known, although this may improve with new HIV testing methodologies. The number of people developing AIDS is a well-characterized population statistic and can be used to measure morbidity. Deaths are also well-reported and the time between AIDS diagnosis and death can be used to measure changes in survival time.

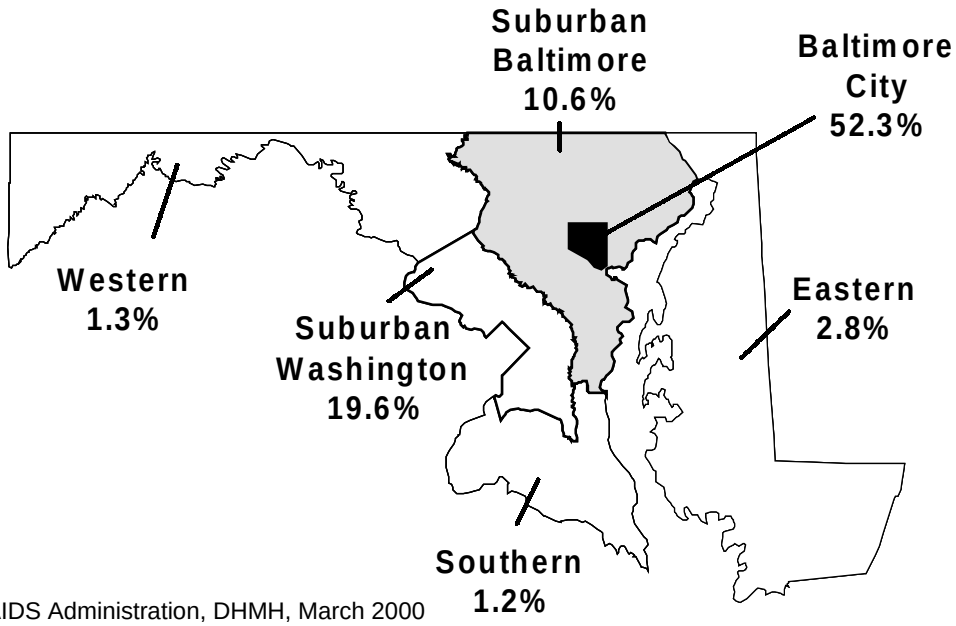
Number of Living HIV and AIDS Cases During Each Year by Race/Ethnicity, Maryland, 1985-1998



Source: AIDS Administration, DHMH, March 2000
Note: HIV surveillance began in year 1994.

During the first half of the 1990s, AIDS incidence continued its historic epidemic growth, from 25/100,000 in 1990 to 44 per 100,000 in 1995. The expansion of the AIDS case definition in 1993 led to an artificial increase in the AIDS incidence rate during 1992-1994. The introduction of a new class of antiretroviral drugs (protease inhibitors) in 1996 resulted in an immediate decline in the AIDS incidence rate (a 12% decline from 1995 to 1996, and a 39% total decline from 1995 to 1998) to 27 per 100,000 population in 1998.

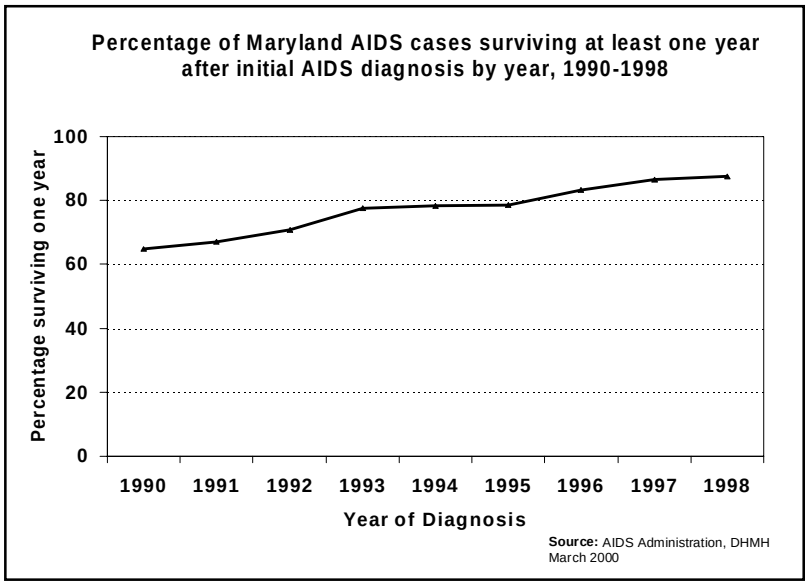
Percentage of Living Maryland HIV and AIDS Cases by Region, as of December 31, 1998



Source: AIDS Administration, DHMH, March 2000
Note: The remaining percentage of cases (12.2%) were diagnosed among inmates at state correctional facilities.

This was mirrored by a decline in the AIDS mortality rate (a 19% decline from 1995 to 1996, and a 60% total decline from 1995 to 1998) to 12 per 100,000 population in 1998. The HIV incidence rate has remained unaffected by the new drugs, increasing slightly from 42 per 100,000 in 1994 to 44 per 100,000 in 1998. This suggests that new cases of HIV continue to occur, but that fewer of the previously infected cases are developing AIDS and dying. The result is an increasing number of people living with HIV and AIDS, a greater proportion of which are pre-AIDS.

The number of living African-American HIV and AIDS cases has increased the most of any racial/ethnic group from around 1,600 in 1990 to over 16,000 in 1998, a ten-fold increase. In contrast, living white HIV and AIDS cases had a four-fold increase in the same time period from almost 800 to just over 3,200 cases. One of the reasons for the large overall increase in living HIV and AIDS cases is that HIV surveillance began in 1994.



The population living with HIV (including living AIDS cases) is concentrated in certain demographic and geographic sub-populations. Of the 19,806 people known to be living with HIV or AIDS during 1998, 47% had AIDS. The HIV and AIDS cases were predominantly African-American (81%) and male (67%). The single largest group was African-American males, 53% of the total, followed by African-American females (28%) and white males (12%). The cases were concentrated in Baltimore City (52%) and the suburban counties surrounding Baltimore (11%) and Washington, D.C. (20%). An additional 12% of cases were diagnosed while incarcerated in State correctional facilities.

The life expectancy after AIDS diagnosis improved throughout the 1990s. The one year survival increased from 65% for cases diagnosed in 1990 to 88% in 1998. During the same time, the median survival time increased from 21 months for cases diagnosed in 1990 to 45 months for cases diagnosed in 1995, the last year for which median survival can be measured. The increase in survival time after AIDS diagnosis preceded the introduction of protease inhibitors. This is attributed to earlier detection of HIV infection and improved treatments, particularly prophylaxis to prevent opportunistic infections.

Objective 1 - Decrease the rate of new AIDS cases by 25%, from 27 per 100,000 population to 20 per 100,000 population.

Objective 2 - Decrease the AIDS death rate by 25%, from 12 per 100,000 population to 9 per 100,000 population.

Objective 3 - Increase time from AIDS diagnosis to death by 25%, from 45 months to 56 months.

Objective 4 - Increase the percent of people with AIDS who live for at least one year, from 88% to 91%.

Action Steps

Particularly among African-Americans and other disproportionately affected populations:

- ⇨ Increase the proportion of people living with HIV who know their serostatus by increasing testing in high risk populations.
- ⇨ Increase the proportion of persons living with HIV who receive care, which will both prolong life and improve quality of life. Services include: ambulatory outpatient/ medical care, case management, self-care education, dental care, medications, mental health treatment/counseling, nutrition, substance abuse treatment counseling, housing, vocational rehabilitation, and other support services.
- ⇨ Increase access and adherence to current and emerging therapies for persons living with HIV.
- ⇨ Increase quality evaluations of services to people living with HIV/AIDS.
- ⇨ Increase the number of culturally competent providers who are skilled at diagnosing HIV/AIDS and providing quality treatment according to established standards for persons living with HIV/AIDS.
- ⇨ Increase collaboration among agencies to reduce barriers and enhance access to and use of needed services among persons living with HIV.

Partners

AIDS Administration, DHMH • Johns Hopkins Medical Institution • Maryland Medical Assistance Program, DHMH • Maryland Association of County Health Officers • MedChi–the Maryland State Medical Society • Maryland HIV Care Consortia • Maryland Local Health Departments • University of Maryland Medical Systems

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Cross-Reference Table for HIV

See Also

Caroline County 167
Kent County 234